

758,943

1 SHEET

COMPLETE SPECIFICATION

This drawing is a reproduction of the Original on a reduced scale.

08/477,1374  
Filed with Insf  
11-6-1998

Fig. 1

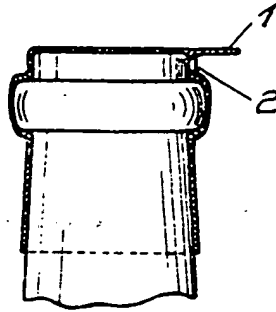


Fig. 2

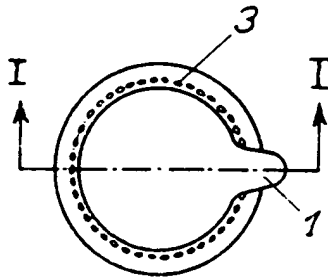
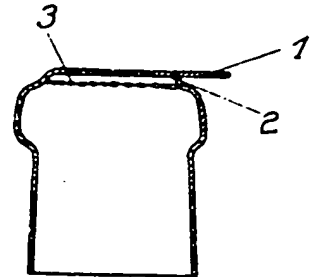


Fig. 3

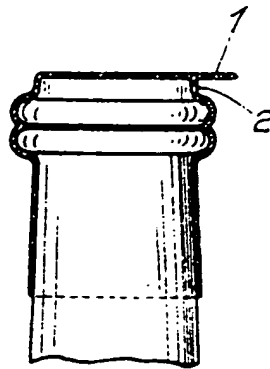


Fig. 4

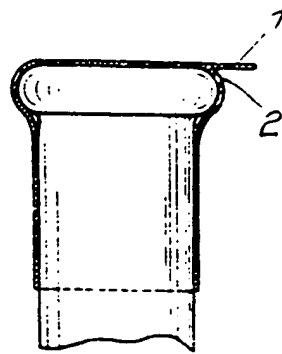


Fig. 5

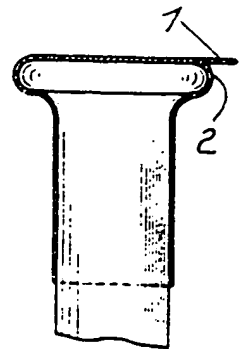


Fig. 6

Best Available Copy

# PATENT SPECIFICATION

758,943



Date of Application and filing Complete

Specification: Dec. 15, 1953.

No. 34836/53.

Complete Specification Published: Oct. 10, 1956.

Index at acceptance:—Class 125(3), T2C.

## COMPLETE SPECIFICATION

### Capsule for Capping Bottles or Similar Objects

I, JANINA MILIEZ, a Citizen of Poland, residing at 34, Boulevard de Magenta, Paris, France, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

A certain number of patterns of capsules for capping bottles are already known. The known capsules are generally of thimble form and are applied to the neck of the bottles after preliminary corking of the latter, the capsule being subsequently contracted to fit closely on to the neck: this contraction of the capsule, after being placed in position, is obtained either by its inherent resilience, or by some mechanical action, or by its return to normal dimensions after it has been stretched by dipping in a liquid. All these known capsules, therefore, assume their final form only after they have been placed in position on the bottle.

They all suffer from the drawback that they do not constitute a closure which is proof against interference: in other words, it is relatively easy for anyone to remove such a capsule without destroying or damaging it and to replace it afterwards so that it appears untouched.

Moreover, some of these known capsules are made of a gelatinous plastic material, and are damaged when exposed to damp atmospheres, such as exist in cellars: capsules made of metal have been used, but these have been folded over, and do not have an aesthetic appearance.

It is an object of this invention to provide a capsule for capping bottles which is tamper-proof, durable, and aesthetic in appearance.

According to this invention, there is provided a tamper-proof capsule for capping a container such as a bottle or the like, having at least one bead around the neck thereof, such capsule having, before application to the container, a shape corresponding to a

[Price 3/-]

portion of the said neck of the container, which includes said bead or beads, and such that when the capsule is in position, on the container, it extends below said bead or beads, the capsule being formed of a thin material of uniform thickness which has sufficient elasticity to enable it to be positioned on the container, whereby, when the capsule is in position, it contracts into tight engagement with the neck of the container and cannot be removed from the container without being destroyed or extensively damaged.

The material used for the capsule may be of such a nature that it is capable of being hardened by a suitable treatment in order to render it tamper-proof. Thus the capsule can advantageously be made of polyvinyl chloride (hereinafter referred to as "vinyl"), a plastic material which possesses a certain resilience when in the form of a relatively thin film or sheet, and which has the property of contracting and hardening after having been dipped in alcohol. This latter property is utilised to obtain the contraction of the capsule after it has been put in position, and to achieve its proof against tampering. In practice, the capsule is dipped in alcohol, and is placed at once on the neck of the container before it has begun to contract: the capsule remains absolutely smooth after having contracted, and so presents a faultless appearance, which cannot be obtained with any other known type of capping capsule.

As the elasticity of vinyl is low, it is necessary to provide in the capsule an aperture which allows the air trapped between the cork, where used, and the capsule, when the latter is put in position, to escape: the operation of setting the capsule in position may be performed with any suitable capping device of a known type.

However, the material used for the capsule may be polyethylene, such as, for example, the material sold under the Registered Trade Mark "Alkathene," which has a better

Best Available Copy

resilience than vinyl, and does not need to be submitted to a pre-treatment before setting on the neck of the container.

In order to facilitate the removal of the capsule, the top of the capsule may be provided on its periphery with a tab adapted to be pulled, and tear-lines provided, so that it is possible to tear off the top of the capsule by pulling the tab.

Several particular embodiments of the invention are illustrated by way of example in the accompanying drawings, in which:—

Figs. 1 and 2 represent, in sectional elevation, a capsule according to the invention, and suitable for a bottle of Burgundy, Fig. 1 showing the capsule placed on the bottle, while Fig. 2 shows it before being placed in position, the section being along the line I—I of Fig. 3;

Fig. 3 is a plan view, corresponding to Fig. 2; and

Figs. 4, 5 and 6 represent, in section similar to Fig. 1, capsules in accordance with the invention, and fitted respectively to a one-litre bottle, with a double bead around the neck thereof, to a Cologne-water bottle, and to a medicine-bottle.

The capsule shown in Figs. 1, 2 and 3 is made of vinyl, or of polyethylene, and moulded by injection, to have a shape corresponding to the neck of the Burgundy bottle to which it is to be applied. After the capsule has been set on the bottle (Fig. 1), it contracts, and regains its original shape (Fig. 2). The capsule is perfectly smooth, and consequently has an irreproachable appearance. When positioned on the container, it is tamper-proof, as hereinbefore explained.

If the capsule is made of vinyl, a tab 1 is disposed on the top of the capsule, at the periphery; under this tab is located an aperture 2 intended to allow the escape of air trapped under the capsule when the latter is set on the container; this aperture is necessary because of the low elasticity of vinyl. If the capsule is made of polyethylene, which has a greater elasticity than vinyl, this aperture can be omitted, air escaping then by an elastic deformation of the capsule.

The capsule shown comprises, in addition, small recesses 3 distributed around the periphery of the capsule, slightly below its top and at the same height as the escape aperture 2; these recesses 3 constitute a tear-line and allow the top of the capsule to be neatly torn off by pulling on the tab when it is desired to uncork the bottle. One could also replace the recesses 3 by a continuous groove. This construction provides for very easy access to the contents of the bottle without using any tool, and the neck of the bottle preserves an irreproachable appearance after this operation.

The capsules represented in Figs. 4, 5 and 6 only differ from the capsules of Figs. 1, 2

and 3 by their shape, which enables them to fit properly on other kinds of bottles.

It has been explained how the contraction of the capsule is obtained after it has been put in position when the material used for the capsule is a vinyl material; it is therefore not necessary to refer to it again.

With polyethylene or "Alkathene" the resilience is sufficient for a capsule made therefrom to contract and return to its initial shape without any special treatment.

It is to be understood that one can also, without departing from the scope of the invention, make similar capsules of material other than vinyl and obtain contraction and hardening of such capsules by any suitable process besides preliminary immersion in alcohol.

What I claim is:—

1. A tamper-proof capsule for capping a container such as a bottle or the like, having at least one bead around the neck thereof, such capsule having, before application to the container, a shape corresponding to a portion of the said neck of the container, which includes said bead or beads, and such that, when the capsule is in position on the container, it extends below said bead or beads, the capsule being formed of a thin material of uniform thickness which has sufficient elasticity to enable it to be positioned on the container, whereby when the capsule is in position it contracts into tight engagement with the neck of the container and cannot be removed from the container without being destroyed or extensively damaged.

2. A capsule according to Claim 1, wherein said capsule is formed of a material with inherently elastic properties.

3. A capsule according to Claim 2, wherein said capsule is formed of polyethylene.

4. A capsule according to Claim 1, wherein said capsule is formed of a material the inherent elasticity of which is low, but which can be softened by a suitable pre-treatment to permit setting the capsule on the said container, said softened material hardening after the capsule is set on the container and contracting into tight engagement with the neck of the container.

5. A capsule according to Claim 4, wherein said material is polyvinyl chloride.

6. A capsule according to Claim 5, wherein said polyvinyl chloride is softened by pre-treatment with alcohol.

7. A capsule according to any of the preceding claims, wherein the capsule is provided with an aperture to permit the escape of air trapped under the capsule when the latter is set on the container.

8. A capsule according to any of the preceding claims, wherein the top of the capsule is provided with a tab at the periphery thereof, and wherein one or more grooves or

- recesses are disposed around the said periphery to constitute a tear-line, whereby the top of said capsule can be removed by pulling on the said tab.
- 5 9. A capsule according to Claims 7 and 8, wherein the said aperture for the escape of trapped air is located beneath the said tab for removing the top of said capsule.
- 10 10. A method for capping a container, such as a bottle or the like, having at least one bead around the neck thereof, by means of a capsule according to any of the preceding claims, such method comprising forming the capsule, extending the latter, setting the  
15 capsule on said neck so that the capsule extends below the bead or beads thereon, and thereafter allowing the capsule to contract until it has returned to its initial shape and size.
- 20 11. A method according to Claim 10, wherein said capsule is formed of a material with inherently elastic properties.
12. A method according to Claim 10, wherein said capsule is formed of poly-  
25 ethylene.
13. A method according to Claim 9, wherein said capsule is formed of a material the inherent elasticity of which is low and wherein the capsule is softened by a suitable  
30 pre-treatment before it is extended and set on said neck.
14. A method according to Claim 13, wherein said capsule is formed of polyvinyl chloride.
15. A method according to Claim 14, 35 wherein said capsule is pre-treated with alcohol before it is set on said neck.
16. A capsule for capping a container, substantially as hereinbefore described, with reference to, and as shown in, Figs. 1, 2 and 40 3 of the accompanying drawings.
17. A capsule for capping a container, substantially as hereinbefore described, with reference to, and as shown in, Fig. 4 of the accompanying drawings. 45
18. A capsule for capping a container, substantially as hereinbefore described, with reference to, and as shown in, Fig. 5 of the accompanying drawings.
19. A capsule for capping a container, 50 substantially as hereinbefore described, with reference to, and as shown in, Fig. 6 of the accompanying drawings.
20. A method for capping a container, substantially as hereinbefore described, with 55 reference to the accompanying drawings.

ARTHUR SADLER & SON,  
Chartered Patent Agents,  
Ocean Chambers, 44, Waterloo Street,  
Birmingham, 2,  
Agents for the Applicant.

Printed for Her Majesty's Stationery Office by Wickes & Andrews, Ltd., E.C.4. 684/2.—1956.  
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies may be obtained.

Best Available Copy